DEPARTMENT OF TRANSPORTATION
FEDERAL AVIATION ADMINISTRATION

A10SO
Revision 12
PIPER

PA-36-285
PA-36-300
PA-36-375

February 25, 2004

TYPE CERTIFICATE DATA SHEET A10SO

This data sheet which is a part of Type Certificate No. A10SO prescribes conditions and limitations under which the product for which the Type Certificate was issued meets the airworthiness requirements of the Federal Aviation Regulations.

Type Certificate Holder — The New Piper Aircraft, Inc.
2926 Piper Drive
Vero Beach, Florida 32960

I. - Model PA-36-285, 1 PCLM (Restricted Category Only), Approved August 31, 1972.

Engine

1 Teledyne Continental 6-285-B or 6-285-C with CMC Injector with fuel flow schedule per curve No. 71-12, or
1 Teledyne Continental 6-285-BA or 6-285-CA (See NOTE 12 for -BA and -CA engines) with CMC Injector with fuel flow schedule per curve No. 77041. Propeller drive ratio to crankshaft .500:1.

Fuel

100/130 minimum grade aviation gasoline

Engine Limits

For all operations, 4000 r.p.m. (2000 propeller r.p.m.) (285 hp)

Propeller and Propeller Limits

1 Hartzell, Hub Model HC-C2YF-1 ( )F, Blade Model F9587A
Pitch Setting: High 27° to 29°, Low 18° ± 0.2° at 30" station.
Diameter: Not over 95", not under 93".
No further reduction permitted.
Spinner: Hartzell A4203 spinner assembly is required.
Propeller Governor: Hartzell Model F-4-6A
OR
1 Hartzell, Hub Model HC-C3YF-1 ( )F, Blade Model F9684-1
Pitch Setting: High 29° to 31°, Low 16.3° to 16.5° at 30" station.
Diameter: Not over 95", not under 93".
No further reduction permitted.
Spinner: Hartzell A4203-1 (See NOTE 8 for data on spinner.)
Propeller Governor: Hartzell Model F-4-6A

Propeller Limitations

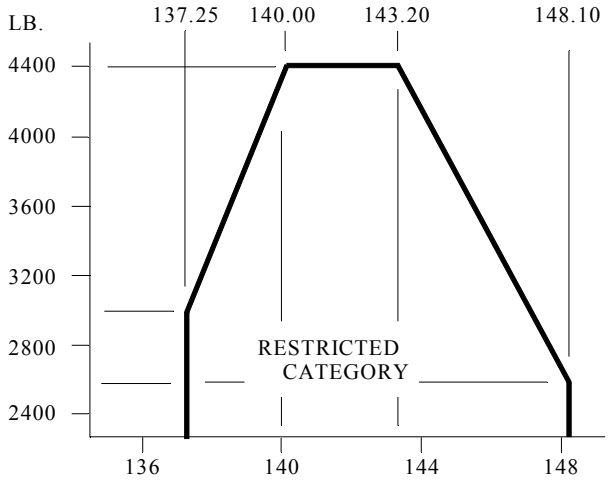
Hartzell Model HC-C2YF-1 ( )F only.
Avoid continuous operation the ground between 950 and 1150 propeller rpm in wind above 15 mph.

Airspeed Limits (CAS)

Maximum operating	135 mph	(117 knots)
V_{fe}, Flaps extended	115 mph	(100 knots)

C. G. Range

(+137.25) at 3000 lb. or less
(+140.0) to (+143.2) at 4400 lb.
(+148.1) at 2600 lb. or less
Straight line variation between points given.



Empty Weight C. G. Range: None

Maximum Weight: 4400 lb. (See NOTE 3)

No. of Seats: 1 (+196.0)

Maximum Baggage: None

Fuel Capacity: 89 gallons at (+138.4) (2 wing tanks) (87 gallons usable)
See NOTE 1 for data on unusable fuel.

Oil Capacity: 9 quarts (5 quarts usable)
See NOTE 1 for data on system oil.

Manufacturer's Serial Numbers: 36-7360001 through 36-7660135 (See NOTE 9).

II. - Model PA-36-300, 1 PCLM (Restricted Category Only), December 12, 1974.
Same as Model PA-36-285 except engine installation.

Engine: 1 Lycoming IO-540-K1G5 with one 5th order and one 6th order pendulum damper.

Fuel: 100/130 minimum grade aviation gasoline

Engine Limits: For all operations, 2700 r.p.m. (300 hp)

Propeller and Propeller Limits: 1 Hartzell, Hub Model HC-C2YK-1 ( )F, Blade Model F8475R*
Pitch Setting: High 29° ± 1°, Low 12° ± 0.2° at 30" station.
Diameter: Not over 84", not under 82.3".
No further reduction permitted.
Spinner: Hartzell 835-36 (See NOTE 8 for data on spinner.)
Propeller Governor: Hartzell Model F-4-11A

*HC-()2YK-() propeller installed on a Lycoming engine may be substituted by HC-()-2YR-() propeller per Hartzell Service Advisory 61

Propeller and Propeller Limits (continued)

OR
1 Hartzell, Hub Model HC-3YR-1 ( )F, Blade Model F8468A-6
Pitch Setting: High 26° ± 1°, Low 11.8° ± 0.2° at 30" station.
Diameter: Not over 80", not under 78".
No further reduction permitted.
Spinner: Hartzell 835-36 (See NOTE 8 for data on spinner.)
Propeller Governor: Hartzell Model F-4-11A

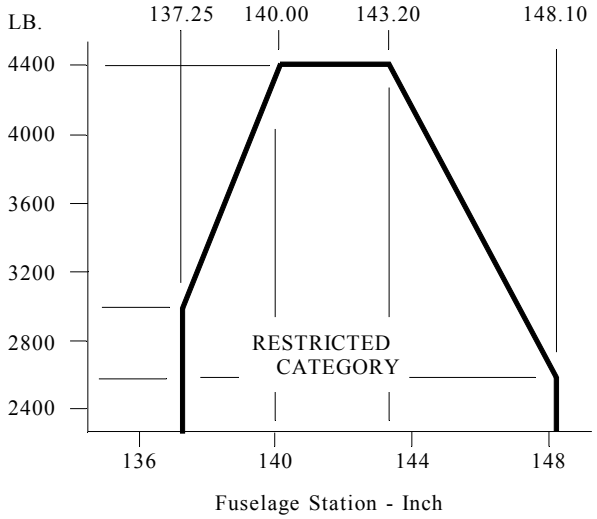
Airspeed Limits

Maximum operating	135 mph CAS,131 mph IAS
V_{fe}, Flaps extended	115 mph CAS,116 mph IAS

C. G. Range

(+137.25)	at	3000 lb. or less
(+140.0) to (+143.2)	at	4400 lb.
(+148.1)	at	2600 lb. or less

Straight line variation between points given.



Empty Weight C. G. Range

None

Maximum Weight

4400 lb. (See NOTE 3)

No. of Seats

1 (+196.0)

Maximum Baggage

None

Fuel Capacity

89 gallons at (+138.4) (2 wing tanks) (86 gallons usable)
See NOTE 1 for data on unusable fuel.

Oil Capacity

12 quarts (9¼ quarts usable)
See NOTE 1 for data on system oil.

Manufacturer's Serial Numbers

36-7560001 through 36-8160023 (See NOTES 9 and 13)

III. - Model PA-36-375, 1 PCLM (Restricted Category), Approved October 4, 1977.

Engine

1 Lycoming IO-720-D1CD or Lycoming IO-720-D1C with one 3.5 order, six 4th order and one 5th order pendulum damper.

Fuel

100/130 minimum grade aviation gasoline

Engine Limits

For all operations, 2500 r.p.m. (375 hp)

Propeller and Propeller Limits

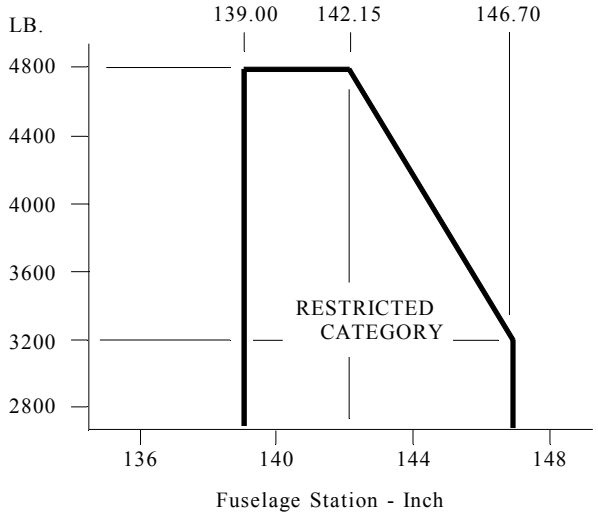
1 Hartzell, Hub Model HC-C3YR-1 ( )F, Blade Model F8475R
Pitch Setting: High 27° ± 1°, Low 13.3° ± 0.2° at 30" station.
Diameter: Not over 86", not under 84".
No further reduction permitted.
Spinner: Hartzell 835-36 (See NOTE 8 for data on spinner.)
Propeller Governor: Hartzell F-4-23

Airspeed Limits

Maximum operating 135 mph CAS,135 mph IAS
V_{fe}, Flaps extended 120 mph CAS,124 mph IAS

C. G. Range

(+139.00) at 4800 lb. or less
(+139.00) to (+142.15) at 4800 lb.
(+146.70) at 3200 lb. or less
Straight line variation between points given.



Empty Weight C. G. Range

None

Maximum Weight

4800 lb. (See NOTE 3)

No. of Seats

1 (+196.0)

Fuel Capacity

89 gallons at (+138.4) (2 wing tanks) (86 gallons usable)
See NOTE 1 for data on unusable fuel.

Oil Capacity

17 quarts (14 quarts usable)
See NOTE 1 for data on system oil.

Manufacturer's Serial Numbers

36-7802001 through 36-8302025 (See NOTE 9)

DATA PERTINENT TO ALL MODELS

Datum — 126.0 inches forward of the wing leading edge at the intersection of the straight and tapered section.

Leveling Means — Two screws right side fuselage, inside below window.

Control Surface Movements

Aileron	(± 1°)	Up	20°	Down	17°		
Elevator	(± 1°)	Up	30°	Down	20°		
Elevator Tabs	(+3°, -1°)	Up	15.5°	Down	22.5°	Elevator Neutral	
Rudder	(± 1°)	Left	25°	Right	25°		
Flaps	(± 1°)	Up	0°	Down	30°	for PA-36-285 and PA-36-300	
	(± 1°)	Up	0°	Down	20°	for PA-36-375	

See NOTE 10 for flap travel restriction.

Certification Basis — FAR 21 dated February 1, 1965, including Amendments 21-1 through 21-24 dated February 9, 1969, and FAR 23 dated August 1, 1967, including Amendments 23-1 through 23-6 dated August 1, 1967, with exception to FAR 23 per FAR 21.25(a)(1). (See NOTE 4)

Application for Type Certificate dated April 30, 1969.
Type Certificate issued August 31, 1972. Obtained by the manufacturer under delegation option procedures.

Production Basis — Approved for manufacture of spare parts only under Production Certificate No. 206.

Equipment — The basic required equipment as prescribed in the applicable airworthiness regulations (see Certification Basis) must be installed in the aircraft for certification. In addition, the following items of equipment are required:

1. VB-646 issued August 19, 1974, for Model PA-36-285, S/N 36-7360001 through 36-7460041.
2. VB-683 issued January 31, 1975, for Model PA-36-285, S/N 36-7560001 through 36-7660135.
3. Piper Report 2077 issued February 4, 1977, for Model PA-36-300, S/N 36-7560001 through 36-8160023, and for Model PA-36-300, S/N 36-7360001 through 36-7460041 with Piper Power Plant Conversion Kit 761 134 per Piper Service Spares Letter No. 346 (See NOTE 13).
4. Piper Report 2125 issued February 7, 1978, for Model PA-36-375, S/N 36-7802001 through 36-8302025.

NOTE 1 — Current Weight and Balance Report, including list of equipment included in certificated empty weight and loading instructions when necessary, must be provided for each aircraft at the time of original certification.

The certificated empty weight and corresponding center of gravity locations must include undrainable system oil (not included in oil capacity) and unusable fuel as noted below:

PA-36-285:
Fuel: 12.0 lb. at +138.4
Oil: 7.5 lb. at +87.0

PA-36-300:
Fuel: 18.0 lb. at +138.4
Oil: 3.5 lb. at +88.5

PA-36-375:
Fuel: 18.0 lb. at +138.4
Oil: 3.5 lb. at +90.5

NOTE 2 All placards required in the approved Airplane Flight Manual and approved Airplane Flight Manual Supplements must be installed in the appropriate locations.

NOTE 3 The PA-36-285 and PA-36-300 have demonstrated satisfactory operation at 4400 lb., and the PA-36-375 at 4800 lb., in the Restricted Category envelope at sea level under standard day conditions. Further weight increases should not be accomplished in the field.

The Normal Category maximum takeoff and landing weight is 3900 lb. Since the hopper load is disposable, landing in excess of this weight should not be required. If it is necessary to make a landing at weight over 3900 lb., the pilot must exercise caution to prevent structural damage to the landing gear and airframe. The takeoff weight should be adjusted also, to suit the runway surface to prevent over-stressing the structure.

NOTE 4 The following exceptions to FAR 23 were granted based on the Restricted Category operating limitations: FAR 23.25(a); 23.77(b); 23.335; 23.337; 23.1505; 23.1507; 23.1545 and 23.1583(a).

The following portions of FAR 23 were considered inappropriate for the intended agricultural operations: FAR 23.65(b); 23.221; 23.473; 23.479; 23.481; 23.497(a); 23.561(d); 23.721; 23.723, 23.725; and 23.727.

NOTE 5 PA-36-285 airplane climb performance at sea level, standard day, 4400 lb. gross weight, 0° flaps and with Piper Dry Materials Dispersal System installed is 338 f.p.m.

PA-36-300 airplane climb performance at sea level, standard day, 4400 lb. gross weight, 0° flaps and with Piper Dry Materials Dispersal System installed is 322 f.p.m. (two-blade propeller), 349 f.p.m. (three-blade propeller).

PA-36-375 airplane climb performance at sea level, standard day, 4800 lb. gross weight, 0° flaps and with Piper Dry Materials Dispersal System installed is 425 f.p.m.

NOTE 6 The PA-36-285 engine installation consists of the basic Teledyne Continental Motors Model 6-285-B, 6-285-BA, 6-285-C or 6-285-CA engine with Teledyne Continental Customer Specification No. 2.

NOTE 7 Model PA-36-285, S/N 36-7360001 through 36-7460041 are eligible for multiple airworthiness certification in the Restricted and Normal Categories in accordance with FAR 21.187. Conversion between categories may be accomplished in accordance with Piper Report VB-592.

NOTE 8 PA-36-285 aircraft may be operated with Hartzell A4201-1 spinner dome removed. Spinner backup plate must remain installed.

PA-36-300 two-blade propeller aircraft may be operated with spinner dome and forward bulkhead removed. Piper aft bulkhead P/N 67791 is required for flight.

PA-36-300 three-blade propeller aircraft may be operated with spinner dome and filler plates removed. Hartzell aft bulkhead P/N C-885-3 is required for flight.

PA-36-375 three-blade propeller aircraft may be operated with spinner dome and filler plate removed. Hartzell aft bulkhead P/N C-885-3 or P/N C-4549 is required for flight.

NOTE 9 The following serial numbered aircraft are not eligible for import certification to the U.S.:

Model PA-36-285:
36-7360050, 36-7460011, 36-7460012, 36-7460013, 36-7460014, 36-7460015, 36-7560088, 36-7660085, 36-7660088, 36-7660091, and 36-7660094.
Model PA-36-300:
36-7760018, 36-7760034, 36-7760047, 36-7760051, 36-7760055, 36-7760120, 36-7760121, 36-7760123, 36-7760125, 36-7760129, 36-7760132, 36-7860010, 36-7860011, 36-7860012, 36-7860043, 36-7860045, 36-7860047, 36-7860049, 36-7860050, 36-7860051, 36-7860069, 36-7860071, 36-7860073, 36-7860089, 36-7860090, 36-7860091, 36-7860092, 36-7860093, 36-7860094, 36-7860095, 36-7860096, 36-7860097, 36-7860098, 36-7860102, 36-7860103, 36-7860104, 36-7860105, 36-7860109, 36-7860111, 36-7860112, 36-7860122, 36-7860123, 36-7960001, 36-7960007, 36-7960008, 36-7960009, 36-7960010, 36-7960011, 36-7960012, 36-7960013, 36-7960014, 36-7960015, 36-7960016, 36-7960017, 36-7960018, 36-7960019, 36-8060002, 36-8060003, 36-8060007, 36-8060010, 36-8060015, 36-8060020, 36-8060021, 36-8060022, and 36-8060023.
Model PA-36-375:
36-7802034, 36-7802050, 36-7802061, 36-7802062, 36-7802063, 36-7802074, 36-7902001, 36-7902002, 36-7902003, 36-7902020, 36-7902022, 36-7902024, 36-7902033, 36-7902035, 36-7902037, 36-7902048, 36-7902049, 36-7902050, 36-7902051, 36-8002005, 36-8002006, 36-8002011, 36-8002013, 36-8002016, 36-8002018, and 36-8002025.

NOTE 10 Wing flap travel on Models PA-36-285 and PA-36-300, S/N 36-7360001 through 36-7460041, is 0° (± 1°) Up, and 20° (± 1°) Down.

NOTE 11 The following life limits are required:

For all PA-36 models:
The wing main spar lower attachment bolts, Piper P/N 77245-00, must be replaced upon the accumulation of 2000 hours time-in-service (TIS) and every 2000 hours TIS thereafter (Ref. Piper Service Bulletin No. 501).
The wing main spar upper attachment bolts, Piper P/N 77245-00, must be replaced upon the accumulation of 4100 hours TIS and every 4100 hours TIS thereafter (Reference Piper Service Bulletin 744).
The wing carry-through spar fittings, Piper P/N 97713-00, 97713-02 or 97713-03, must be replaced upon the accumulation of 4100 hours TIS and every 4100 hours TIS thereafter with P/N 97713-03 (Reference Piper Service Bulletin 744).
The wing spar fittings, Piper P/N 97712-00, must be replaced upon the accumulation of 4100 hours TIS and every 4100 hours TIS thereafter (Reference Piper Service Bulletin 744).

For Models PA-36-285 and PA-36-300, S/N 36-7360001 through 36-7560003 and 36-7660123 through 36-8160023, and Model PA-36-375, S/N 36-7802001 through 36-8302025:
The spar carry-through assembly, Piper P/N 97370-00 or P/N 76824-02, as applicable, must be replaced upon the accumulation of 4100 hours TIS and every 4100 hours TIS thereafter with P/N 76824-02 (Reference Piper Service Bulletins 552 and 744).

For Models PA-36-285 and PA-36-300, S/N 36-7560056 through 36-8160023 and Model PA-36-375, S/N 36-7802001 through 36-8302025:
The spar assembly, Piper P/N 97701-00 (Rev. P) and P/N 97701-01 (Rev. P) must be replaced with Piper Kit 764 393, left spar assembly, and Kit 764 394, right spar assembly, upon the accumulation of 4100 hours TIS and every 4100 hours TIS thereafter (Reference Piper Service Bulletin 744).

For Models PA-36-285 and PA-36-300, S/N 36-7560004 through 36-7660122:
The spar carry-through assembly, Piper P/N 76767-00 must be replaced upon the accumulation of 4000 hours TIS with Piper P/N 76824-02; and P/N 76824-02 must be repalced every 4100 hours TIS thereafter (Reference Piper Service Bulletin 744).

For Models PA-36-285 and PA-36-300, S/N 36-7360001 through 36-7560055:
The spar assemblies, Piper P/N 97701-00 (Rev. N or earlier) and P/N 97701-01 (Rev. N or earlier) must be replaced upon the accumulation of 3100 hours TIS with Piper Kit 764 393 (left spar assembly) and Kit 764 394 (right spar assembly), as applicable; and Kits 764 393 and 764 394 must be replaced every 4100 hours TIS thereafter (Reference Piper Service Bulletin 744).

NOTE 12 Field installation of Teledyne Continental engines 6-285-BA and 6-285-CA require the following:

(a) Engine installed in accordance with instruction per Teledyne Continental Kit EQ6534, EQ6535, EQ6539 or EQ6540 (Ref. Teledyne Continental Newsletter dated April 4, 1977).

(b) Engine cowl modified in accordance with Piper Service Letter No. 774 (Applicable to S/N 36-7360001 through 36-7660102).

(c) The following Airplane Flight Manual (AFM) required:

Aircraft Serial Numbers	AFM
36-7360001 through 36-7460041	VB-646
36-7560001 through 36-7660102	VB-683

NOTE 13 PA-36-285, S/N 36-7360001 through 36-7660135, may be converted to a PA-36-300 upon the installation of Piper Power Plant Conversion Kit 761 134 as specified in Piper Service Spares Letter No. 346. Airplane Flight Manual, Piper Report 2077 approved February 4, 1977, is required for this installation.

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